momentum institut
l'anthropocène et ses issues

Personal Carbon Allowances

Rationing and Responsibility

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"In 1871 Paris was under siege, in a final effort to resist the enemy what did the people ask for? Rationing!".*

* *Pierre Kropotkine, L'Anarchie dans l'Evolution Socialiste, Paris, Le Révolté, 1887, p12.*

Degrowth thinkers tend to recognize a central thesis in which the finite quantity of natural resources automatically creates a limit to growth. This idea of material finitude can also be found in the works of Nicholas Georgescu-Roegen[1], who emphasizes the inevitable degradation of useful energy as a result of the laws of thermodynamics and entropy.

As such, it is no exaggeration to state that degrowth puts a particular stress on the notion of limited, declining and non-substitutable resources, whether in terms of energy, water, biodiversity, open spaces and so on.

A significant number of theoretical and practical consequences arise from this conception, as the idea of finite resources is sufficiently disturbing (especially in the current political context[2]) as to constitute the framework for a whole new paradigm. This point deserves to be developed a little: the fact of considering a stock as limited will automatically transforms it into a strongly political issue. Indeed, if a resource exists in limited quantities, its consumption by some to the detriment of others develops into a zero sum game where all consumers are associated by the fact that there is no alternative. Abundance allows for independence, but a limited resource introduces interdependence. Thus, each and every actor is affected by the decisions and attitudes of others; the need for a political discussion to determine the terms of this shared access rapidly becomes a necessity.

By considering this perspective, we can understand the recent regained interest for various forms of energy rationing. Rationing is very often only considered as an instrument to limit consumption whilst omitting its capacity for solidarity. However, in a situation of scarcity, limitation is the key to attaining solidarity precisely because we reason in terms of a zero sum game where the consumption of each individual is in competition with the rest. This article will firstly expose the proposals that arose over the past few years that aim to install energy rationing and more specifically those that take the form of individual quotas. Secondly, we will revisit two historical situations of shortages and rationing. For each part we will seek to illustrate how the paradigm of finite resources necessarily politicizes the issue of equal distribution and how rationing appears as a useful instrument to achieve solidarity in a time of scarcity.

Reconsidering rationing to face ecological crisis

Anticipating, for various reasons, a strong reduction in the quantity of available energy, supporters of rationing see it as a way of sharing what would be left in such a way that inequality is not deepened by the energy crisis. Contrarily to most measures laid out by the welfare state, here help given to the poorest spheres of society does not take the form of a simple economic transfer from one category to another: the guarantee of a minimum level of consumption for all is only achievable by the quantitative limitation of the consumption of the richest, precisely because we reason in terms of a zero sum game where consumers are rivals.

What is the carbon card?

In the 1990s, two British intellectuals, David Fleming and Mayer Hillman, proposed the first draft of what would later be known as the "carbon card".[3] They defended the idea of a national scale public policy, in which each individual would see himself allocated an annual quota of CO_2 emissions that would effectively condition the entire consumption of primary energies in the country (gas, electricity, diesel, etc). These emission quotas would be divided into units or points that would be recorded on an integrated circuit card (or smart card), thus explaining the name "carbon card". For example, if you were to buy some fuel for your car in a petrol station, you would have to pay for its monetary value in currency as per usual, but also for its carbon price, paid in carbon units according to the amount of pollution that the fuel would generate. The annual carbon budget, or in other words the total quantity of emissions allowed per year, would gradually diminish in order to follow each countries carbon reduction plans. As such, the United Kingdom should see its own carbon budget decrease 80% by 2050 by comparison to its 1990 level of emissions (Climate Change Act, 2008). Hence, the size of individual quotas distributed to each inhabitant of the country would progressively and proportionately diminish.

The quotas distributed would be strictly equal from one person to another. However, not all people have the same levels of energy consumption. For this reason, Fleming and Hillman put forward the idea of a trading system, where those wishing to consume more than their annual quota could buy units from those who are more economical and are left with a surplus of units. The price of these units would evolve

1 Nicholas Georgescu-Roegen, *Degrowth, Entropy, Ecology, Economy*, Paris, Sang de la Terre, 2006.

2 Andrew Dobson, *Green Political Thought, London*, New York, Routledge, 2007 (1990).

3 David Fleming "Stopping the Traffic", Country Life, vol. 140, 19, 9 May 1996, p; 62-65; David Fleming, "Tradable Quotas: Using Information Technology to Cap National Carbon Emissions", *European Environment*, 7 – 5 Sept- Oct 1997, p. 139-148; David Fleming, "Your Climate Needs You", *Town and Country Planning*, 67 çth of October 1998, p. 302-304; Mayer Hillman and Tina Fawcett, "*How We Can Save the Planet*", London, Penguin Books, 2004.

according to supply and demand (Fleming, 2007). This is equivalent to putting in place a progressive tariff composed of two parts: the initial allowance of carbon units is free, however beyond this initial allowance, additional units would be charged. This system implies a redistribution of income from the larger CO_2 emitters to the much smaller ones (we shall return to this point later).

Rationing is not seen in the very strict sense of the word, as one can legally exceed his annual quota. However, this extra-consumption is limited and conditioned by the availability of surplus carbon units on the market. On the other hand, it is strictly impossible to exceed the national carbon budget, as its progressive decrease is predetermined, resolutely inscribing the entire country in a perspective of energetic descent.

Fleming and Hillman's ideas first caught the attention of academics[4], to later attract much political attention throughout the 2000s. The carbon card was discussed in the House of Commons as early as 2004 and by 2006 was the object of an official study set by the Department for Environment, Food and Rural Affairs under the respective governments of Tony Blair and Gordon Brown. Unfortunately, this all ended with the 2008 crisis that cast the whole project out of the political spotlight. Today the carbon card is no longer a prominent political issue, but is still a part of the Green Party's program and still holds support from diverse political figures within the House of Commons as well as from a number of NGOs and environmental think tanks.[5]

Recognizing the existence of environmental limits

The fundamental idea that structures the carbon card is the need to incorporate and recognize the binding character of environmental limits within which societies must organize themselves in order to function.

The environmental limits mentioned here are of two types: one material limitation and one temporal limitation. The material limitation is the most obvious: it corresponds to the quantity of greenhouse gases we can emit without affecting the stability of the climate (the scientific evaluation of such a limit would later be subjected to multiple negotiations). Hence, this volume of GHG defines the national carbon budget that in turn determines the acceptable volume of fossil energies the country as a whole, can burn. This effectively acts as a direct constraint on the amplitude of human thermal activity.

On the other hand, the temporal limit is rarely taken account of, when in fact it is directly linked to a political upheaval induced by the ecological crisis: the entry into the time of "delay".[6] A global ecological crisis is indeed characterized by the risk of "overshooting" or going beyond capacity limits leading to an irreversible and systemic breakdown. To avoid these risks it does not come down to simply "doing better" but to do *enough and within a given delay*. Furthermore, according to Günther Anders' analysis, catastrophes can only be postponed and never definitively put to one side, thus inscribing ourselves in a sort of count down (the delay), when modern politics has built itself on a continuous conception of time. The carbon card however, does take this temporal dimension of ecological crisis into account, by instituting from the start the idea of a gradually declining national carbon budget with specific targets in time, set within a global perspective of energetic descent until 2050 at least. In this way, the material constraint determined by the quantity of fossil energy available for combustion is directly linked to the temporal constraint of the time in which they are used, thus reflecting the material and temporal dimensions of environmental limits.

The originality of the carbon card, by comparison to other climate policies, stems from the institutionalization of these ecological constraints, thus allowing for strong environmental integrity. The result of this policy in terms of GHG emissions would usually be known right from the start, as the national carbon budget (acting as a maximum volume) would be the basis to calculate and distribute individual carbon quotas. This is a significant difference with other policies such as carbon taxes, where the price of the tax is also known from the start but not the ecological result, which remains uncertain. On the other hand, if the ecological result is certain when using the carbon card, it is the price of surplus units available on the carbon market that cannot be foreseen.

More than a mere mechanical disparity, it is a fundamental divergence of paradigms that opposes these approaches. All public policies carry a certain vision of the world. The carbon card views a world in which there exist certain environmental limits, certain of which have already been "overshot"[7], to the point where it imperils the future of human society.[8] This dangerous situation of "overshoot" demands to reintegrate societies within these existent limits, by a "normative management under environmental constraints" to use the words of René Passet.[9] The carbon card sets the sustainable threshold of resource extraction as the determinant factor in how we use them; as such we should give absolute priority to the compliance of these limits. The carbon tax on the other hand, is primordially conditioned by the need to be economically viable: its approach is therefore much more mainstream.

The reminder of this article was published in April 2013 as the Institut Momentum's first collection of essays on degrowth, entitled "*Penser la décroissance*" with "Presses de Sciences Po".

4 Mayer Hillman and Tina Fawcett, "*How we Can Save the Planet*", London, Penguin Books 2004; Richard Starkey and Kevin Anderson, "Domestic Tradable Quotas: A Policy Instrument for Reducing Greenhouse Gas Emissions from Energy Use", Norwich, Tyndal Centre for Climate Change Research, 2005.

5 Mathilde Szuba and Luc Semal, "Les CRAGS: le rationnement contre l'abondance dévastatrice: l'exemple des Carbon Rationing Action Groups", Sociologies Pratiques, n°20, Presses de Sciences Po, 2010, p. 89-95; David Fleming and Shaun Chamberlin, TEQs (Tradable Energy Quotas): A Policy Framework for Peak Oil and Climate Change, London, All-Party Parliamentary Group on Peak Oil and The Lean Economy Connection, 2011.

6 Bruno Villalba borrows this notion from Günther Anders: Bruno Villalba, "L'Ecologie politique face au délai et à la contraction démocratique", *Ecologie & Politique*, n°40, 2010, p. 95-113; Günther Anders, "La Menace Nucléaire: consideration radicales sur l'âge atomique", *Sine Loco*, Le Serpent à Plumes, 2006 (1972).

7 Johan Rockström et al., "A Safe Operating Space for Humanity", *Nature*, 461, 2009, p. 472-475.

8 William R. Jr. Catton, *Overshoot: The Ecological Basis of Revolutionary Change*, Urbana, Chicago (IL), University of Illinois Press, 1982.

9 René Passet, *L'Economique et le Vivant*, Paris, Economica, 1996 (1979).

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Change of Era

The Momentum Institute met for the first time on the 10th of March 2011, the day before an earthquake struck Japan and unleashed the nuclear catastrophe we know as Fukushima.

The starting point of the Momentum Institute is based on the awareness that today we are living at the end of the period marked by the greatest material wealth human history has ever known – a wealth that is founded on cheap, concentrated, temporary energy sources that made everything else possible. Just as the most important sources of energy for this material wealth are entering irreversible and inevitable decline, we are embarking on a period of generalised economic contraction.

The Momentum Institute is dedicated to responding to the challenges of our era: how can we organise the transition to a post-growth, post-fossil fuel, climate-altered world? How can we understand and act on the issues of the Anthropocene? What are the emergency exits? What will resilient societies look like in the time of the triple crisis: energetic, economic, and ecological?

The post petrol, post-nuclear, post-coal transition means completely redesigning and rethinking the infrastructures of society and alongside this, working to achieve a new social imaginary by envisaging a near future without petrol and without non-renewable energy. The objective of our approach is to establish a community of contributors made up of citizens engaged in the major areas of transition.

The contributors to the Momentum Institute intervene in their area of expertise, in relation with the thinking on transition. They produce diagnostics, analyses, scenarios, and original proposals regarding strategies of transition and resilience. The Momentum Institute is there to encourage them and to make them known, to individuals, to businesses, to local and national governments. We are also concerned with providing visibility to emerging solutions that are already put into practice by towns in transition, such as energy cooperatives, AMAPs (organic local produce cooperatives), non-profit businesses, social employment, and eco-districts.

If we manage to disseminate them, the initiatives and contributions for imagining and creating the post-petrol world will spread – both locally and globally. They will come to represent the status quo and the efforts that we go to today will not be unusual tomorrow. In the meantime, we have a chance, and it is perhaps our last chance, to step back from the precipice. A challenge, a singular moment, a window of opportunity: Momentum.